

Amendments to the Specification

Please replace paragraphs [0121] and [0122] with the following amended paragraphs:

[0121] Another embodiment of the invention is shown in FIGS. 25-31, where the nucleus 130 is elongated, with a flattened section 150 that is either a partial cylinder with first and second convexly curved sections 152 and 154 on both sides of the flattened section. It is believed that this design, when mated with a cylindrical surface 156 on the interior of the upper end plate 136, shown in FIG. 29, will provide better wear characteristics because it will have surface contact during medial/lateral bending and line contact during flexion/extension. The nucleus 130 includes bearing surfaces 155, 159 formed on opposing sides of the nucleus, which may be called first and third bearing surfaces. The interior side of the upper end plate 136 includes a bearing surface 161 which may be called a second bearing surface, and the interior side of the lower end plate 138 includes a bearing surface 163 which may be called a fourth bearing surface.

[0122] The elongated shape of the nucleus 130 is illustrated in FIGS. 25 and 26, which show that the nucleus has a round cross section with constant medial-lateral radius from anterior to posterior (A-P), with the flat section 150 in the middle being oriented to provide a correction angle as described above, for the flatted portions on the other embodiments of the nucleus. The nucleus 130 is asymmetrical, with the flattened surface 150 oriented at an angle and having a greater height at the anterior end than at the posterior end. Thus when implanted between two vertebral bodies in the A-P orientation indicated in FIGS. 25 and 26, the nucleus 130 has an asymmetrical shape aligned with the sagittal plane, and across or crossing the coronal plane, of the vertebral bodies. When viewed from a lateral perspective as in FIG. 25, flattened section 150 is seen to be a straight section extending anterior to posterior, and crossing the coronal plane. The interior surface 156 of the upper end plate 136 has a cylindrical shape with the same constant radius in the anterior/posterior direction as the nucleus. A pair of spaced apart structures, such as arms 165 and 167, extend inwardly from the upper end plate 136, the arms positioned on opposing lateral sides of the sagittal midline of the end plate. A second straight section 169 of the second bearing surface 161 lies between the arms 165, 167.